XI.—*Horary Observations taken at Dádúpur, in conformity with Sir John Herschel's Circular. By Col.* COLVIN, *Lieut.* BAKER, *and Lieut.* DURAND, *Engineers.*

[The original, whence we have with permission extracted these tables for publication, has been forwarded to the Secy. of the South African Phil. Inst.]

Barometrical Observations taken at Dádúpur, Sept. 1835.

Days.	Time.	Wet Bulb.	Detached Thermometer.	Barometer, by Cary.		Mountain Barom. by Troughton.		Remarks.
				Attached Thermt.	Barometer.	Attached Thermt.	Barometer.	
	H	D.	D.	D.	Inch.	D.	Inch.	
		°	°	°		°		
20	18	73·	72·8	73·2	28·690	73·6	23·924	Calm. Mist cannot be seen through for 300 yards, appears less over head.
,,	19	74·9	74·8	75·	695	75·	932	Ditto ditto clearing off a little, with just a breath of wind from east.
,,	20	75·4	75·7	75·8	706	75·6	942	Ditto ditto ditto objects becoming visible 800 to 1000 yards off, air just perceptible E.
,,	21	77·2	78·	78·4	727	78·	960	Wind S. W. light and variable, clear except light wreaths of mist along the horizon.
,,	22	80·9	81·8	81·9	744	81·3	983	,, ditto very light ditto, with light low transparent clouds, apparently the remains of the mist.
,,	23	81·6	83·5	84·6	740	84·4	981	,, W. light ditto, still a few light clouds.
,,	24	81·6	84·6	85·3	728	84·2	963	,, W. light and variable, ditto ditto ditto.
21	1	82·	85·8	86·3	704	85·7	934	,, W. light breeze, ditto ditto ditto.
,,	2	81·6	87·5	87·7	665	86·9	904	,, W. ditto ditto ditto, except the line of mountains which is clouded.
,,	3	80·4	87·2	87·7	636	87·2	872	,, W. by N. ditto ditto ditto ditto ditto, N. to S. E. in white masses.
,,	4	79·4	86·8	87·2	609	86·7	845	,, N. W. ditto ditto ditto ditto ditto N. E. to S. E. ditto.
,,	5	79·7	85·1	86·2	610	85·4	834	,, Ditto ditto ditto ditto ditto ditto.
,,	6	77·6	82·2	83·	711	82·4	810	,, Ditto much fallen, ditto light clouds over the mountains and on the S. W. horizon.
,,	7	77·	80·	80·8	626	80·2	823	,, Ditto as before, ditto ditto ditto ditto.
,,	8	75·2	78·2	79·	604	79·	829	,, Ditto ditto ditto, stars bright.
,,	9	75·5	77·7	78·5	605	78·2	849	,, Ditto light ditto ditto.
,,	10	75·	76·4	77·7	612	78·7	860	,, Ditto breeze in gusts, ditto ditto.
,,	11	73·3	75·	75·7	620	76·2	870	,, Ditto ditto light ditto ditto.
,,	12	73·2	74·2	75·	618	75·3	842	Light air westerly ditto ditto.
,,	13	72·	73·	73·5	609	74·2	832	Ditto ditto ditto ditto.
,,	14	70·7	71·7	72·5	615	73·	846	Ditto ditto ditto ditto.
,,	15	70·5	71·2	71·8	607	72·2	827	Ditto ditto ditto ditto.
,,	16	70·	70·8	71·2	607	71.5	829	Ditto ditto ditto ditto.
,,	17	70·	70·3	71·	622	71·2	840	Ditto ditto ditto do dawn appearing.
,,	18	69·3	69·7	70·4	620	70·6	848	,, Calm, ditto mountains cloudless.
,,	19	71·4	71·6	72·	637	72·	869	,, Ditto ditto ditto.
,,	20	75·2	76·5	76·5	663	75·8	890	,, Ditto ditto, except light clouds over the mountains.
,,	21	78·	80·	80·	678	79·2	907	,, Ditto ditto ditto ditto N E. to S. E.
,,	22	79·6	82·	82·3	690	81·5	916	A very light air from E. ditto large white clouds on and behind the mountain range.
,,	23	80·2	83·5	83·9	683	83·4	918	,, Ditto ,, W. ditto ditto ditto ditto.
,,	24	80·4	85·2	85·5	674	84·5	903	,, Ditto ,, W. ditto masses of ditto ditto ditto N. by E. to S. E.
22	1	81·	87·	87·1	647	86·5	872	,, N. W. light breeze, ditto ditto ditto.
,,	2	80·8	87·3	87·8	605	87·5	839	,, Ditto ditto ditto ditto ditto ditto.
,,	3	81·2	88·1	88·5	584	87·7	823	,, Ditto in gusts ditto ditto ditto ditto.
,,	4	80·8	87·8	88·4	573	87·7	795	,, ditto ditto ditto ditto ditto ditto ditto.
,,	5	79·8	86·	87·	572	86·3	790	,, W. ditto ditto ditto, mountains clear to N. cloudy to E. and S. E.
,,	6	79·	82·6	84·2	568	83·5	786	,, W. light ditto ditto ditto ditto.

Observation commenced at 6·0·30· A. M. of 21st September, common reckoning.

Barometrical Observations taken at Dádúpur, March, 1836.

Day.	Time.	Wet. Bulb.	Detached Thermometer.	Barometer, by Cary.		Mountain Bar. by Troughton.		Remarks.
				Attached Therm.	Barom.	Attached Therm.	Barom.	
	H	D.	D.	D.	Inch.	D.	Inch.	
20	22	65°·3	71°·	70·6	28·988	70·	29·128	Wind E.
,,	23	67·	71·5	73·2	982	72·3	116	Wind E. sky clear, over head light clouds to South, Sirmur mountains clouded.
,,	24	69·	75·	75·5	970	75·	105	Wind E. light clouds over mountains excepting the sub-Himálayas, which are visible.
21	1	70·7	77·5	78·	954	77·3	080	Ditto ditto ditto ditto.
,,	2	70·2	77·5	78·5	923	78·	053	Wind S. E. light but steady clouds in direction of mountains cover more of the sky.
,,	3	67·0	75·	75·3	912	74·6	023	Wind E. Gusty, clear over head, light clouds all round the horizon.
,,	4	66·2	74·5	75·2	913	74·5	038	Wind N. by E. unsteady, clear over head, cloudy from N. W. to N. E. outline of mountains visible.
,,	5	64·	71·2	72·	907	71·2	026	Wind N. by E. unsteady, clear to S. W. Elsewhere clouded, stormy appearance to north.
,,	6	64·8	71·	71·5	902	70·6	020	Wind N. light. Clear to S. W. Elsewhere light clouds, outline of hills visible.
,,	7	62·2	66·	67·2	897	66·4	014	Ditto ditto ditto ditto ditto.
,,	8	60·4	63·	64·1	892	64·1	010	Ditto ditto ditto ditto ditto.
,,	9	59·	60·5	62·	900	61·5	027	Wind S. E. night clear.
,,	10	58·5	60·	61·	898	61·	030	Ditto very light, night clear.
,,	11	57·	58·5	59·5	894	59·5	018	Clear. Clear star light.
,,	12	56·2	57·	58·5	884	59·	011	Ditto ditto.
,,	13	54·5	55·7	57.	881	56·5	000	Wind N. very light, clear star light.
,,	14	53·5	54·5	55·5	860	55·	28·996	Ditto ditto ditto.
,,	15	53·	53·8	54·5	856	55·5	984	Ditto ditto ditto.
,,	16	52·5	52·5	55·	854	53·2	982	Ditto ditto ditto.
,,	17	51·	51·3	52·3	855	52·	984	Wind N. brisk, clear star light. Dawn commencing.
,,	18	49·3	49·5	51·7	863	51·	29·003	Wind N. light, sky clear.
,,	19	49·5	50·	51·	881	50·2	021	N. by E. ditto ditto.
,,	20	58·2	55·5	55·7	915	54·7	059	Ditto ditto ditto.
,,	21	59·	63·	62·7	948	61·4	097	Ditto ditto ditto.
,,	22	62·2	68·	67·7	964	66·7	116	Ditto ditto ditto.
,,	23	64·7	70·7	71·	971	70·	111	Calm, sky clear.
,,	24	66·5	73·5	74·	954	73·2	091	Wind S. E. light, sky clear.
22	1	68·8	76·1	76·5	944	75·7	077	Ditto ditto ditto.
,,	2	68·5	76·6	76·8	923	76·1	036	Calm, sky clear.
,,	3	69·7	78·	78·5	900	77·9	023	Wind S. W. light, sky clear, except light clouds over the mountains.
,,	4	69·7	78·	78·5	868	78·	000	Wind W. light ditto ditto ditto.
,,	5	69·5	77·7	78·3	864	77·5	28·994	Ditto ditto ditto ditto.
,,	6	70·	76·	76·7	867	76·	991	Ditto ditto ditto ditto.

Time ascertained by one observation of equal altitudes. Observation commenced at 10h. 21m. 31s. of 21st March, common reckoning, and was continued at exact intervals of one hour. (For convenience the minutes and seconds have been omitted in the table.—Ed.)

Memoranda relative to the above Table of Barometrical observations for September 1835. *By Lieut.* DURAND.

Instruments employed.—Colonel COLVIN's Barometer was made by CARY. The cistern is of ivory, the Instrument is adjusted for observation by bringing the surface of the mercury to a level with the slit in the socket of the stopcock of the cistern, by means of a brass screw at the bottom of the cistern. This instrument was, when compared with the standard Barometer in Calcutta, by J. PRINSEP, Esq., found to be correct.

Lieut. DURAND's Barometer is one of TROUGHTON and SIMM's mountain Barometers. When compared with the standard Barometer, it stood 0.043 too low.

In order to determine the amount of change which the two instruments might have suffered, relatively to each other, in consequence of the journey from Calcutta, a comparison was instituted between the heights shown by the two Barometers, during the month of June 1835; the following is the result.

Mean. Height of Bar.	Attd. Ther.	Detd. Ther.	Moist Bulb.	Time.	Mean of the foregoing.				
28.744	90.4	89.51	83.15	10 A. M	28·6944	92.92	91.83	84.145	CARY's Barometer.
28.6488	95.44	94.25	85.14	4 P. M.					
28.7486	87.83	86.51	83.22	10 A. M.	28.7035	88.616	87.236	83.	TROUGHTON and SIMM's Barometer.
28.6585	89.4	87.96	82.79	4 P. M.					

Whence may be deduced, that CARY's barometer suffered considerable derangement from the inevitable jolting, &c. attendant on so long a journey. TROUGHTON's had evidently been less disordered, probably but little so; without a second comparison with the standard barometer, however, the comparative accuracy of TROUGHTON's rests upon supposition.

Previous to the day on which the hourly observations were to commence, CARY's Barometer was accidentally put out of order, and it became requisite to re-fill the tube with mercury; this was accordingly effected, but the means for safely heating the filled tube not being at hand, and the tube appearing to the eye free from air, it was inserted into the instrument; the observations show the great difference which this untimely accident caused in the heights of the two mercurial columns.

Thermometers.—The attached thermometers of both barometers read off to degrees.

The thermometer employed as a moist bulb, is one made by TROUGHTON and SIMMS. When compared in Calcutta it stood 1·3 too high; the scale is graduated to degrees.

The detached thermometer also by TROUGHTON and SIMMS, reads off only to two degree divisions; when examined in Calcutta it was found to be 0·4 too high.

From the foregoing remarks on the thermometers, it is evident that the division of the scales of these instruments did not admit any perfect accuracy in reading off the decimal parts of a degree: the decimal parts in the table are therefore only careful approximations, and under particular circumstances, such as reading off at night, &c. small inaccuracies must have been unavoidable.

Time.—The time of apparent noon and the rate of chronometer were ascertained by a series of observations of equal altitudes of the sun, on the 17th, 18th, 19th and 20th September.

Location of Instruments.—The instruments were placed in a verandah facing the north, perfectly shaded, and sheltered from the wind, without, at the same time, hindering a free circulation of air. CARY's Barometer stood about 4*ft.* 6, from the wall; TROUGHTON's about 1*ft.* 6, from the wall, the space partitioned off and allotted to the instruments not admitting their further removal from the northern front of the building.

Place of Observation.—Dádúpur is situated on the right bank of the Jamna, a little below the junction of the Sombe: the position of the Canal

Department depot is somewhat north of the village, and is in latitude 30° 12 N. and about longitude 77° 23′ 45″ E. as deduced from an observation of the transit of mercury on the 5th May, 1832. The range of low mountains separated from the more lofty and older formations by the Kyadur Doon is about 20 miles from Dádúpur. The word mountains which enters amongst the remarks on the particulars of the weather, must be understood to allude to the distant ranges of the Himálayas, and not to the low and neighbouring mountains.

It is necessary to add,that the hourly observations were taken by Colonel Colvin, Engrs., Lieut. Baker, Engrs., and Lieut. Durand, Engrs.

Dádúpur, Nov. 24th, 1835.

The same remarks are applicable to the March observations, Cary's Barometer not having been yet boiled ; the site of the instruments was changed, being now under a thatch erected for them in a free circulation of air.

XII.—*Proceedings of the Asiatic Society.*

Wednesday evening, the 1*st June,* 1836.

W. H. Macnaghten, Esq. Vice-President, in the chair.

Messrs. W. Bruce and R. W. G. Frith, proposed at the last meeting, were ballotted for, and elected members of the Society.

Dr. Lumqua, proposed at the last meeting, was, upon the recommendation of the Committee of Papers, elected an honorary member.

The Rev. R. Everest, requested his name to be withdrawn from the list of members.

Captain W. Foley regretted, that private circumstances obliged him also to retire from the Society.

Read letters from Colonel J. Colvin, Engineers, Colonel Caulfield, and Colonel Stacy, acknowledging their election as members of the Society.

Read letters from Nicholas Carlisle, Esq. Secretary to the Antiquarian Society of London, and J. Forshall, Esq. Secretary to the British Museum, acknowledging the receipt of copies of the Index, &c.

Read a letter from Captain H. Harkness, Secretary to the Oriental Translation Committee of the Royal Asiatic Society, stating, that arrears of the Society's subscription were due, to the amount of £31 10*s.* from 1833 to 1835, inclusive.

Ordered, that the arrears be paid up, with an apology for the delay.

The Secretary stated, that upon an application from himself on the part of the Society, the Government had been pleased to grant exemption from postage on all certified "*proof sheets,*" addressed by him to authors or editors for correction, as well as on their return, similarly attested to his address. The Government was also willing to grant exemption from duty on objects of Natural History or Curiosity, imported for or exported from the museum ; application to be made in each particular case.

Library.

Read a letter from Captain R. B. Pemberton, forwarding a copy of his report on the eastern frontier of British India, with an appendix and maps, for presentation to the Society.

Also, from Dr. McClelland, a copy of his work entitled " Inquiries in Kemaon," Statistical and Geological.

Read a letter from James R. Ewart, Esq. forwarding on behalf of Captain J. Jervis, a copy of his publication on Indian Meteorology.

Die Philosophie der Hindu Vaedanta Sara von Sadananda des Ram Krishna Tirtha von Dr. Othmar Frank—*presented by the author.*

Ueber das Bild des Welthaumeisters, Visvakarma, von Othmar Frank —*presented by the author.*